

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A computer-implemented malware detection system for determining whether an executable script is malware according to its functionality, the malware detection system comprising:

a malware signature store including at least one known malware script signature, wherein each malware signature in the malware signature store is a normalized signature of a known malware script; and

a normalization module that obtains an executable script, ~~and normalizes the executable script, thereby generating a script~~ and generates a normalized signature for the executable script, wherein generating a normalized signature for the executable script comprises translating tokens from the executable script into normalized tokens conforming to a common format;

[[and]] wherein the malware detection system ~~compares the script~~ is configured to:

compare the normalized signature [[for]] of the executable script to the at least one ~~script~~ normalized malware signature in the malware signature store to determine whether the executable script is malware; and

report whether the executable script is malware according to the determination.

2. (Currently amended) The malware detection system of Claim 1, further comprising a comparison module, [[and]] wherein the comparison module compares the ~~script~~ normalized signature [[for]] of the executable script to the at least one ~~script~~ normalized signature in the malware signature store for the malware detection system.

3. (Currently amended) A computer-implemented malware detection system for determining whether an executable script is malware ~~according to its functionality~~, the malware detection system comprising:

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a malware signature storage means including at least one known malware ~~script~~ signature, wherein each malware signature in the malware signature store means is a normalized signature of a known malware script;

a normalization means that obtains an executable script, ~~and normalizes the executable script, thereby generating a script and generates a normalized signature for the executable script,~~ wherein the normalized signature for the executable script comprises a set of normalized tokens translated from corresponding tokens in the executable script into a common format suitable for comparison with the at least one malware signature in the malware signature store means wherein a script signature comprises ~~normalized functional contents of an executable script in a format that may be compared to the normalized functional contents of other executable scripts;~~ and

a comparison means that compares the ~~script~~ normalized signature for the executable script to the at least one ~~script~~ malware signature in the malware signature storage means;

wherein the malware detection system is configured to determine whether the executable script is malware according to the comparison performed by the comparison means, ~~determines and report~~ whether the executable script is malware.

4. (Currently amended) A computer-implemented method for determining whether a computer-executable script is ~~[[a]]~~ malware ~~script~~, the method comprising:

obtaining an executable script;

~~normalizing the executable script thereby generating a first script~~ normalized signature ~~for the executable script,~~ wherein ~~a script~~ the first normalized signature comprises normalized tokens translated from corresponding tokens in the ~~functional contents of an executable script in a format that may be compared to the normalized functional contents of other executable scripts~~ suitable for comparison to normalized signatures of known malware;

comparing the first ~~script~~ normalized signature to at least one ~~script~~ normalized signature of known malware; ~~scripts; and~~

determining, based on the previous comparison, whether the executable script is [[a]] malware ~~script; and~~

reporting the results of the determination as to whether the executable script is malware.

5. (Currently amended) A tangible computer-readable medium bearing computer-executable instructions which, when executed on a computing device, carry out the method for determining whether a computer-executable script is malware, comprising:

obtaining an executable script;

~~normalizing the executable script thereby~~ generating a first ~~script~~ normalized signature for the executable script, wherein ~~a script~~ the first normalized signature comprises normalized tokens translated from corresponding functional contents of [[an]] the executable script in a format ~~that may be compared to the normalized functional contents of other executable scripts~~ suitable for comparison to normalized signatures of know malware;

comparing the first ~~script~~ normalized signature to at least one ~~script~~ normalized signature of known malware ~~scripts; scripts; and~~

determining, based on the previous comparison, whether the executable script is [[a]] malware ~~script; and~~

reporting the results of the determination as to whether the executable script is malware.

6. (New) The malware detection system of Claim 2, wherein translating tokens from the executable script into a common format suitable for comparison with the at least one malware signature in the malware signature store comprises renaming tokens from the executable script according to a common naming convention.

7. (New) The malware detection system of Claim 6 further configured to:

if the prior determination indicates that the executable script is a partial match to at least one malware signature in the malware signature store:

generate a second normalized signature for the executable script, wherein generating a second normalized signature comprises translating tokens from the executable script into a second common format suitable for comparison with a second normalized malware signature of known malware in the malware signature store; and

determine whether the executable script is malware according to a comparison between the second normalized signature and at least one second normalized signature in the malware signature store.

8. (New) The malware detection system of Claim 7, wherein translating tokens from the executable script into a second common format suitable for comparison with a second normalized malware signature of known malware in the malware signature store comprises translating tokens of the executable script into a common name according to each token's type.

9. (New) The malware detection system of Claim 6, wherein generating a normalized signature for the executable script further comprises generating a set of normalized tokens for each routine in the executable script.

10. (New) The malware detection system of Claim 3, wherein determining whether the executable script is malware according to the comparison performed by the comparison means comprises determining whether the comparison found a complete match between the normalized signature for the executable script and a normalized malware signature in the malware signature store means and if so, reporting that the executable script is malware.

11. (New) The malware detection system of Claim 10, wherein determining whether the executable script is malware according to the comparison performed by the comparison means further comprises:

determining whether the comparison found a partial match between the normalized signature for the executable script and a normalized malware signature in the malware signature store and if so:

generating a second normalized malware signature for the executable script, the second normalized signature comprising tokens from the executable script translated into a second common format suitable for comparison with second normalized malware signatures of known malware in the malware signature store means; and

comparing the second normalized signature for the executable script to second normalized signatures of known malware in the malware signature store means to determine whether the second normalized signature for the executable script is a complete match to a second normalized signature of known malware in the malware signature store means, and if so, reporting that the executable script is malware.

12. (New) The malware detection system of Claim 11, wherein translating tokens from the executable script into a second common format suitable for comparison with second normalized malware signatures of known malware in the malware signature store means comprises translating tokens of the executable script into a common name according to each token's type.

13. (New) The method of Claim 4, wherein determining, based on the previous comparison, whether the executable script is malware comprises determining if the first normalized signature for the executable script is a complete match with a normalized signature of known malware, and if so, reporting that the executable script is malware.

14. (New) The method of Claim 13, wherein determining, based on the previous comparison, whether the executable script is malware further comprises:

determining if the first normalized signature for the executable script is a partial match with a normalized signature of known malware, and if so:

generating a second normalized malware signature for the executable script, the second normalized signature comprising tokens from the executable script translated into a second common format suitable for comparison with second normalized malware signatures of known malware; and

comparing the second normalized signature for the executable script to second normalized signatures of known malware to determine whether the second normalized signature for the executable script is a complete match to a second normalized signature of known malware, and if so, reporting that the executable script is malware.

15. (New) The method of Claim 14, wherein translating tokens from the executable script into a second common format suitable for comparison with second normalized malware signatures of known malware comprises translating tokens of the executable script into a common name according to each token's type.

16. (New) The method of Claim 14 further comprising comparing the second normalized signature for the executable script to second normalized signatures of known malware to determine whether the second normalized signature for the executable script is a partial match to a second normalized signature of known malware, and if so, reporting that the executable script is potential malware.

17. (New) The computer-readable medium of Claim 5, wherein determining, based on the previous comparison, whether the executable script is malware comprises determining if

the first normalized signature for the executable script is a complete match with a normalized signature of known malware, and if so, reporting that the executable script is malware.

18. (New) The computer-readable medium of Claim 17, wherein determining, based on the previous comparison, whether the executable script is malware further comprises determining if the first normalized signature for the executable script is a partial match with a normalized signature of known malware, and if so:

generating a second normalized malware signature for the executable script, the second normalized signature comprising tokens from the executable script translated into a second common format suitable for comparison with second normalized malware signatures of known malware; and

comparing the second normalized signature for the executable script to second normalized signatures of known malware to determine whether the second normalized signature for the executable script is a complete match to a second normalized signature of known malware, and if so, reporting that the executable script is malware.

19. (New) The computer-readable medium of Claim 18, wherein translating tokens from the executable script into a second common format suitable for comparison with second normalized malware signatures of known malware comprises translating tokens of the executable script into a common name according to each token's type.

20. (New) The computer-readable medium of Claim 19, wherein the method further comprises comparing the second normalized signature for the executable script to second normalized signatures of known malware to determine whether the second normalized signature for the executable script is a partial match to a second normalized signature of known malware, and if so, reporting that the executable script is potential malware.